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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,714	12/05/2003	Ju-hyung Kim	1568.1081	6907
49455	7590	03/23/2005	EXAMINER	
STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			WALKER, KEITH D	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/727,714

Applicant(s)

KIM ET AL.

Examiner

Keith Walker

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 29-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group II (claims 3-28) in the reply filed on January 13, 2005 is acknowledged. The traversal is on the ground(s) that the inventions of Group I and Group II are not separately usable as required to maintain a prima facie restriction under the two way standard set forth in MPEP 806.05 (c). This is not found persuasive because the restriction is based on intermediate final product, not combination sub-combination, where the intermediate product is useful to make another final product as set forth in MPEP 806.04 (b). The intermediate product can be useful in another final product such as a motor or switch. The final products are patentably distinct and therefore the restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

2. Applicant's election with traverse of species II-d in the reply filed on January 13, 2005 is acknowledged. The traversal is on the ground(s) that the examiner is not unduly burdened by the examination of the species. This is not found persuasive because the election of species is due to the distinctness of the species and since the claims are directed to independent inventions, restriction is proper pursuant to 35 U.S.C. 121, and it is not necessary to show a separate status in the art or separate classification.

The requirement is still deemed proper and is therefore made FINAL.

3. Applicant's request for claim 12 to be considered generic due to the unspecific nature of the generation element and safety device compared to claims 3, 6, and 9 is acknowledged. The fact that a claim does so read is not conclusive that a claim is generic. It may define only an element or subcombination common to the several species (MPEP 806.04(d)). Claim 12 is seen as only a partial element of the claims 3, 6, and 9.

The requirement is still deemed proper and is therefore made FINAL.

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a translation of the foreign application should be submitted under 37 CFR 1.55 in reply to this action.

***Information Disclosure Statement***

1. The information disclosure statements filed on December 5, 2003 and March 25, 2004 have been placed in the application file and the information referred to therein has been considered as to the merits.

***Drawings***

2. The drawings received on December 5, 2003 are acceptable for examination purposes.

***Specification***

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3. The disclosure is objected to because of the following informalities: paragraph [0021] mentions a "cap plate 2" and should read "cap plate 21". Appropriate correction is required.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 27 & 28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 & 28 of copending Application No. 10/737,837. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both claim a can housing an electric generation element with a safety device, a plate attached to a first surface of the can, and a lead unit electrically connecting the first terminal and the second terminal through the safety device.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 103***

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12-14 & 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,976,729 (Morishita) in view of US Patent 6,492,058 (Watanabe) and as evidenced by US Patent 5,188,909 (Pedicini).

Morishita teaches a can housing an electrical generating element (Abstract). The lithium cell has a first surface of the outer can and a second surface being the lid (Col. 4, ll. 1-16). It is obvious to one skilled in the art to attach one electrode to a first surface of the case and the opposite electrode to a second surface to make a battery with external contacts, as evidenced by Pedicini (Col. 5, ll. 52-66). The outer can and lead are made of the same material, aluminum, (clm. 13) and are welded together using ultrasonic welding (clms. 27, 28) (Col. 2, ll. 37-40). Claims 27 and 28 are seen as product-by-process claims and even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The product is the outer can with the lead attached. The method of forming the weld is not germane to the issue of patentability of the device itself and therefore this

limitation has not been given patentable weight. Further, Morishita teaches the use of different materials in the making of the leads with alternate welding techniques. As stated above, the outer can and lead are made of the same material and attached using ultrasonic welding so a smaller heat value is required, thereby preventing the occurrence of pinholes and cracks (Col. 2, ll. 37-53). Two-layer cladding for the lead plate is also used for current utilization (Col. 5, ll. 22-27). So regarding the different first and second materials used as leads in claims 14 & 18-25, the use of multiple materials is taught and it would have been obvious to one having ordinary skill in the art at the time the invention was made to pick lead materials based on the use in the battery and the style of welding needed. It is held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 125 USPQ 416).

Morishita does not speak directly to the use of a lead connecting the two terminals through a safety device (clms. 12, 14), which acts to hinder the current flow when the voltage in the battery increases (clms. 17, 26). Morishita does not explicitly disclose a protecting circuit connecting the terminal and safety device (clms. 18-20)

Watanabe teaches using a positive temperature coefficient (PTC) safety device between the terminals (Fig. 10, 15, Col. 8, 43-49). The PTC protects the battery by restricting the flow of current when the temperature increases and a rapid increase in the voltage will cause the battery to heat up. A protection circuit is used in conjunction with the PTC to aid in preventing the over-charging and over-discharging (Fig. 1 & 2,

Col. 1, ll. 13-20). The protection circuit is connected to the safety device and the second terminal (Col. 8, ln. 65 – Col. 9, ln. 5).

The motivation to use the PTC and protection circuit with the lithium cell is to protect the battery from over-charge or over-discharge by restricting the flow of current when the temperature increases or the if the fluctuations in the voltage rise or drop beyond predetermined limits (Col. 5, ll. 15-25).

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the lithium cell of Morishita with the PTC and protection circuit of Watanabe to improve the safety of the cell.

8. Claims 15 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishita and Watanabe as applied to claim 12 above, and further in view of Pedicini.

The teachings of Morishita and Watanabe as described above are incorporated herein.

Morishita and Watanabe do not expressly disclose a safety vent in the cap that closes an opening in the can.

Pedicini teaches sealing the opening of the battery with a cap assembly that has a vent for the cell (Col. 5, ll. 52-66).

The motivation to use a cap with a vent is to provide a means for the expulsion of any internal gas pressure created by the battery. The pressure will not only cause a decline in the effectiveness of the battery but can cause the battery to rupture.



Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the battery of Morishita and Watanabe with the cap vent to promote a safer and more efficient battery.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Walker whose telephone number is 571-272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kdw

  
**PATRICK JOSEPH RYAN**  
**SUPERVISORY PATENT EXAMINER**